

SOUTH COAST AQMD NGV PROGRAMS

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Overview

- Clean Fuels Program
 - Engines
 - After-Treatment
 - Vehicles
 - Misc. Technologies
- Incentive Programs

Clean Fuels Program (RD&D)

- ❑ Funded by vehicle registration surcharge and fines
- ❑ \$10 million annually
- ❑ Cost share $\geq 50\%$
- ❑ Contracts for \$100K-\$1M
- ❑ Solicited/Unsolicited proposals
- ❑ 80+ projects under contract

NG Engine Projects

- ❑ DDC 8.5L (S-50) 0.5 NOx
- ❑ Cummins-Westport 5.9L 0.5 NOx
- ❑ Cummins 8.3L 0.2 NOx
- ❑ MD SING: to be announced

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NG After-Treatment Projects

- ❑ WVU Catalyzed Particulate Filter, CPF ECS/Lubrizol Technology C8.3L Gas+
- ❑ Cummins-Westport CPF Engelhard Technology C8.3L Gas+
- ❑ ECS/Lubrizol Oxidation Catalyst Low Toxics DDC 8.5L

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NG Vehicle Projects

- ❑ Cummins-Westport NGV Vocational Study and Preliminary Design
- ❑ So Cal Edison Hybrid-Electric Utility Service Truck Capstone MTG
- ❑ Mack Refuse Truck 11L 0.5 NOx
- ❑ NABI 45' Composite-Body Hybrid-Electric Bus C8.3L Gas+
- ❑ UCB HCCI Hybrid-Electric Bus?

NG Miscellaneous Projects

- ❑ USA PRO LNG Odorization
- ❑ WVU Dedicated-NG Refuse Trucks Emission Evaluation

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NGV Incentive Programs

- ☐ Carl Moyer
- ☐ School Bus
- ☐ Rule 2202 AQIP
- ☐ State Mitigation

Approved Incentive Funding 2002

	State \$M	EPA \$M	Clean Fuels \$M	AQMD \$M	Total \$M
Carl Moyer	9.3				9.3
School Bus	18.6	5.0	0.53	1.5	25.7
ZEV Incentive	2.0				2.0
Rule 2202 AQIP				4.9	4.9
State Mitigation	7.0				7.0
NOx & PM Red.				8.5	8.5
TOTAL					\$57.4

Carl Moyer Program

	On-Road		Off-Road	
	Trucks	Buses	Marine	Other
FY 98-99	104	120	8	128
FY 99-00	58	143	26	67
FY 00-01	588	507		222
FY 01-02	201	166	38	29
TOTAL	951	936	72	446

Future Carl Moyer Funding

- ❑ RFP released - proposals Due Oct. 10
- ❑ \$12.3 million
- ❑ Low-**NOx** Alternative Fuels & Diesel
- ❑ On-Road (cls 5-8) & Off-Road Vehicles
- ❑ [www.aqmd.gov/
carl_moyer_program_2003.html](http://www.aqmd.gov/carl_moyer_program_2003.html)
Connie Day (909) 396-3055

Future School Bus Program

- ❑ RFP released - proposals due Oct. 22
- ❑ \$2.1 million, 10% infrastructure
- ❑ 15-17 NG school buses (\$25K match)
- ❑ Public schools only
- ❑ www.aqmd.gov/rfp/

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Future R2202 AQIP Program

- ❑ RFP released - proposals Due Nov. 7
- ❑ \$2.0 million
- ❑ Any category of equipment/project
- ❑ VOC, NOx, CO quantifiable/excess
- ❑ www.aqmd.gov/trans/aqip.html

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Future State Mitigation Program

- ❑ Possible quick-term RFP by end of year
- ❑ Estimated \$200K
- ❑ Low-NOx & PM Alt. Fuels & Diesel
- ❑ On-Road (cls 5-8) & Off-Road Vehicles
- ❑ www.aqmd.gov/rfp/

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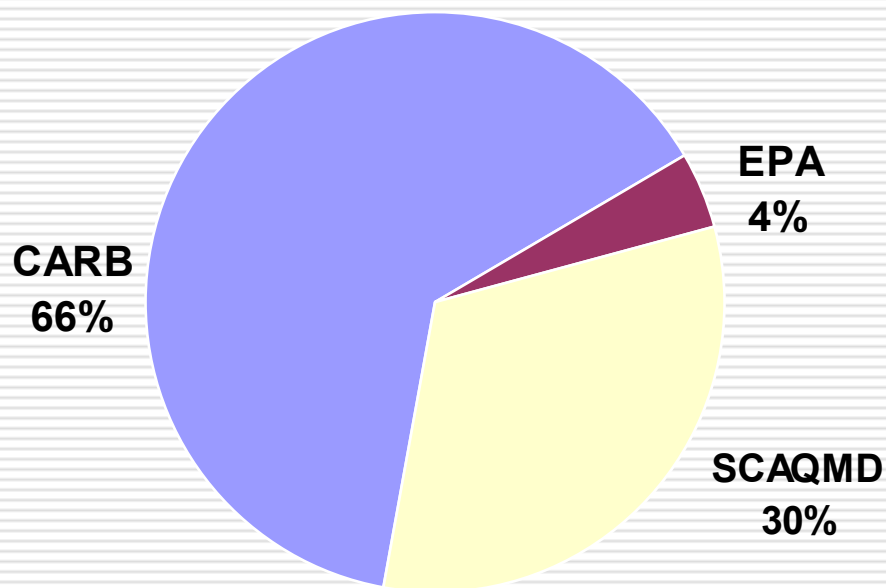
Questions

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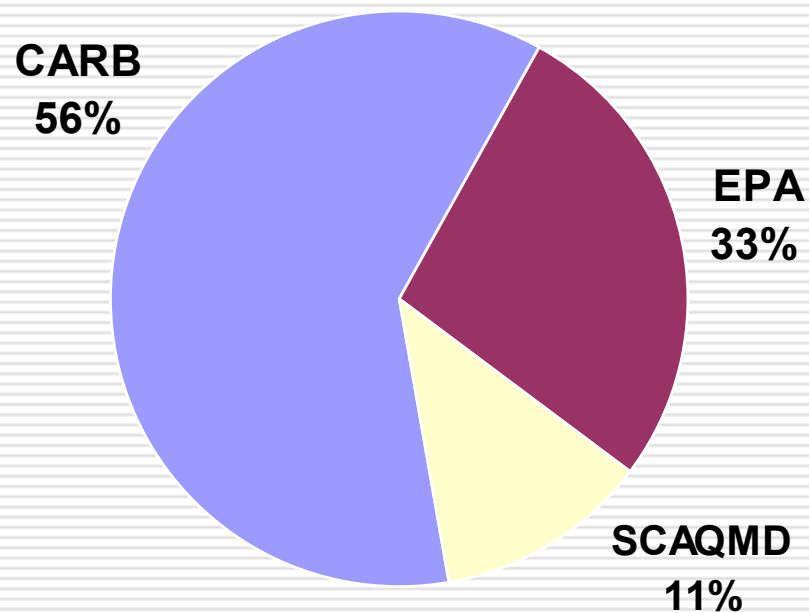
2003 AQMP Key Findings

- ❑ Air Quality has Continued to Improve
- ❑ Increase in Estimated Emissions Inventory (mainly Mobile Sources)
- ❑ Significant Reductions Needed for Attainment Demonstration
- ❑ Fair Share of Reductions Required from State and Federal Agencies

Relative Contribution by Agency to VOC and NO_x Inventories



2010 VOC Emissions = 659 Tons/Day



2010 NO_x Emissions = 764 Tons/Day

Recommended Strategies for State & Federal

- Light- & Medium-Duty Vehicles
 - Replacement of Emission Controls
 - Enhance I/M with Remote Sensing
 - Accelerate Vehicle Retirement
 - New Reformulated Gasoline Standards
- Heavy-Duty Diesel Trucks/Buses
 - Retrofit with Lean-NOx Catalysts

Recommended Strategies for State & Federal (continued)

- ☐ Recreational Marine
 - Replace with 4-Stroke Engines
 - Retrofit 4-Stroke Engines w/Catalysts
- ☐ Construction/Industrial Equipment
 - Repower with New Engines
- ☐ Residential Lawn & Garden Equipment
 - Electrification

Recommended Strategies for State & Federal (continued)

- ☐ Consumer Products
 - Low & Ultra-Low VOC Products
- ☐ Ships
 - Cold Ironing
- ☐ Aircraft
 - More Stringent National Standards
- ☐ Trains
 - Low-Emission Locomotives

Recommended Strategies for State & Federal (continued)

TOTAL ESTIMATED REDUCTIONS

142-172 tpd VOC (need 349)

127 tpd NOx (need 234)

Additional Control Concepts for CARB Consideration

- Light- & Medium-Duty Vehicles
 - Enhanced I & M Program
 - Accelerate Fleet Turnover
 - Extend Emission Control Warranties
- Consumer Products
 - Demand-Side Strategies
 - Public Education

Additional Control Concepts for CARB Consideration (continued)

Heavy-Duty On-Road Vehicles

- Enhanced I & M Program
- Requirements or Incentives for Alternative Fuels (emulsified diesel?)
- Incentives for Engine Repowers

Additional Control Concepts for CARB Consideration (continued)

- ❑ Off-Road Mobile Diesel Sources
 - Retrofit Controls
 - Airport GSE Electrification
 - Idle Control Devices for Locomotives
- ❑ Small Off-Road Gasoline Engines
 - Retrofit with Catalysts

Questions

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